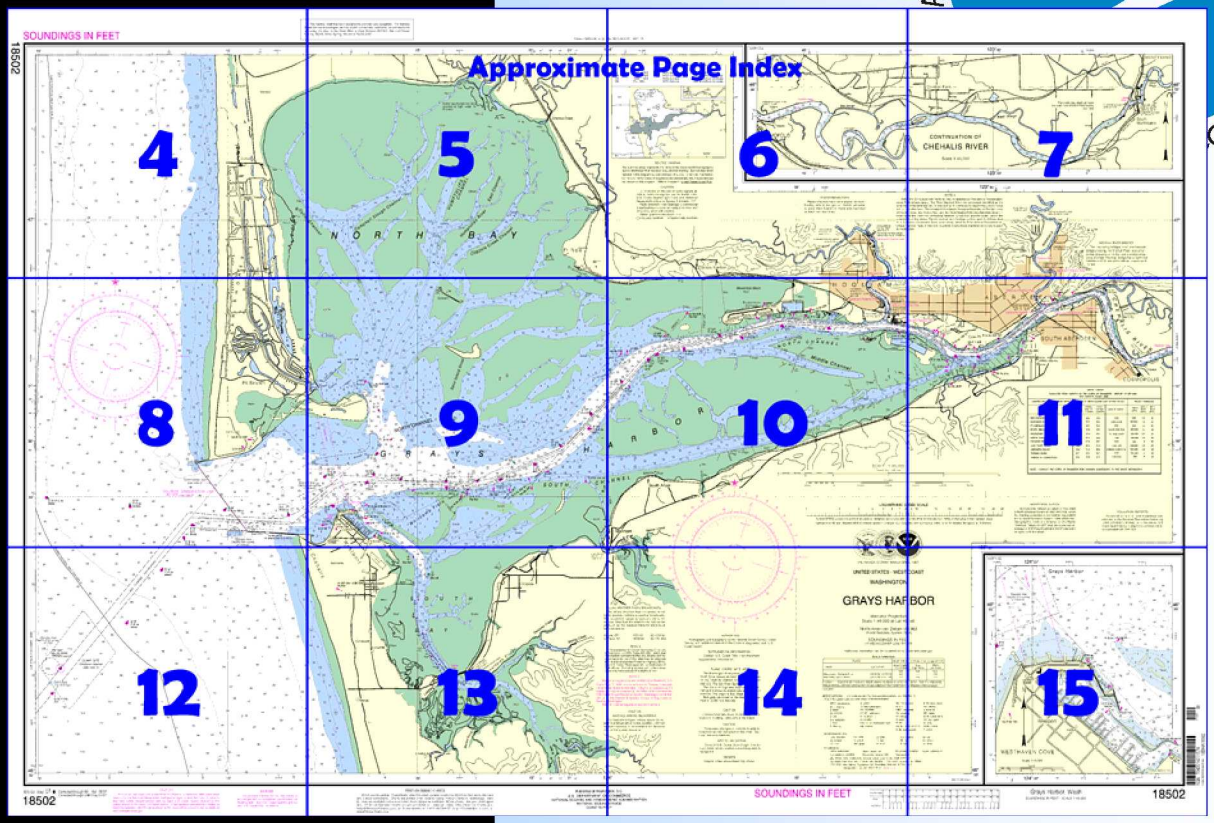
BookletChart™

Grays Harbor

(NOAA Chart 18502)

A reduced scale NOAA nautical chart for small boaters. When possible, use the full size NOAA chart for navigation.

- ☑ *Complete, reduced scale nautical chart*
- ☑ *Print at home for free*
- ☑ *Convenient size*
- ☑ *Up to date with all Notices to Mariners*
- ☑ *United States Coast Pilot excerpts*
- ☑ *Compiled by NOAA, the nation's chartmaker.*



Home Edition (not for sale)

Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
301-713-2770

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

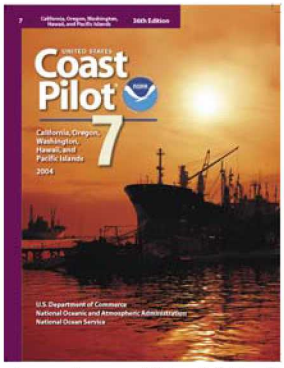
This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at http://www.NauticalCharts.NOAA.gov.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.



[Coast Pilot 7, Chapter 11 excerpts]

(75) **Grays Harbor** entrance is about 40 miles N of Cape Disappointment and 93 miles S of Cape Flattery. The bay and its tributaries furnish an outlet to an extensive timber area. Grays Harbor is an important lumber port in the foreign and domestic trade. Oil is delivered by tanker; logs, lumber, pulpwood, and wood chips are shipped out.

(76) The bay at the entrance is about 2 miles wide, but shoals extending S from Point Brown contract the navigable channel to a width of 0.7 mile. From its entrance the bay extends E for 15 miles to the mouth of Chehalis River. The bay is filled by shoals and flats; these bare at low water and are cut by numerous channels.

(77) **Point Chehalis** is low and sandy and is bare of trees for 1.5 miles S of its extremity. A jetty extends seaward from the end of the point. A Coast Guard lookout tower is prominent on the point.

(78) **Grays Harbor Light** (46°53.3'N., 124°07.0'W.), 123 feet above the water, is shown from a 107-foot white truncated octagonal pyramidal tower on the seaward side of Point Chehalis.

(79) **Point Brown,** the N entrance point, is 2.5 miles N of Point Chehalis; it is low, rounding, and sandy, with shoals extending S and W which, together with those extending W from Point Chehalis, form the bar at the entrance. The point is wooded to within 0.5 miles of the extremity. A jetty extends W from the point. A small-craft basin is NE of the point. The entrance to the basin is marked by lights; the approach channel is marked by a line of lighted and unlighted dolphins. A submerged jetty extends about 0.6 mile NE from the N side of the basin entrance. A 30-ton mobile hoist is at the basin. Reported depths of 5 feet are available through the natural channel leading to the basin with similar depths inside the basin.

Prominent features

(80) The country about Grays Harbor is flat and featureless, with few conspicuous objects. **Saddle Hill**, about 310 feet high, 8 miles N of the entrance and 2 miles inshore, is the most conspicuous feature.

(81) Grays Harbor Light shows prominently on a closer approach to the entrance. A micro tower, painted a red and white checkerboard pattern, is 3.6 miles NNE of the N jetty and a large rust-colored standpipe, lighted at night by floodlights, is 2.5 miles SSE of Point Chehalis. Both these objects are prominent on a closer approach, and the standpipe is reported to be visible for a considerable distance at night. In clear weather **Brackenridge Bluff,** on the N shore 6 miles inside the entrance, is quite prominent. It is a reddish cliff about a mile long, rising in two places to a height of 80 feet; from seaward it is visible only through the entrance.

(82) In clear weather **Neds Rock,** off Brackenridge Bluff, shows prominently from inside the entrance; it is reddish.

(85) The entrance to Grays Harbor, between two jetties, is marked by two lighted ranges and buoys. Inside the bay, a Federal project channel provides depths of 36 feet to about Cow Point, thence 30 feet to Cosmopolis, about 9 miles above the bay entrance. The channel inside the bay to Cosmopolis is well marked. There is no deep-draft navigation above Cosmopolis.

(86) The jettied entrance has a tendency to shoal at the curve on the Point Chehalis side. Submerged sections of the N and S jetties extend seaward about 0.2 and 0.9 mile, respectively, from the visible sections. A lighted horn buoy, equipped with a high intensity flashtube, is off the submerged section of the S jetty.

(87) The best anchorage is N of Westport and SE of **Damon Point** in 30 to 60 feet. The holding ground is good, and there is more swinging room here than elsewhere in the harbor.

(101) **Grays Harbor Coast Guard Station** is on the S side of Westhaven Cove. The town of **Westport,** a summer resort and fishing town, is about a mile S of Westhaven Cove.

(105) **Bay City,** 3.7 miles SE from Westhaven Cove, on the E shore of **South Bay** formerly was a whaling station. The wharf, built originally for the old fertilizer factory, is now in ruins, and there are no marine facilities now at Bay City. The fixed highway bridge at Bay City has a clearance of 39 feet.

(106) For the rest of the 2.6-mile distance, South Bay is crooked and full of shoals to the mouth of **Elk River,** which is used some for logging.

(107) **Markham,** site of a large cranberry plant and a small seafood company, is on the S side of the bay at the mouth of **Johns River,** a shallow stream crossed by a fixed highway bridge with clearance of 33 feet, near the entrance. Above the bridge, the stream is navigable only for rowboats.

(108) **Hoquiam** and **Aberdeen** are twin cities about 14 miles above the harbor entrance. Hoquiam is on the river of that name, and Aberdeen is on Chehalis River. South Aberdeen is across the river, but is part of the city of Aberdeen.

Table of Selected Chart Notes

Corrected through NM Apr. 28/07
Corrected through LNM May 01/07

HEIGHTS
Heights in feet above Mean High Water.

Mercator Projection
Scale 1:40,000 at Lat 46° 56'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

WISHKAH RIVER BRIDGES
The two swing bridges and one bascule bridge crossing the Wishkah River have a horizontal clearance of 75 feet and a vertical clearance of 8 feet. The fixed bridge has a horizontal clearance of 75 feet and a vertical clearance of 16 feet.

CAUTION
BASCULE BRIDGE CLEARANCES
For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

PLANE COORDINATE GRID
The Washington State plane coordinate grid, South Zone, (based on NAD 1927) is indicated on this chart by dashed ticks at 10,000 foot intervals. The last three digits are omitted.
The Corps of Engineers local plane coordinate grid is shown by dotted ticks at 10,000 foot intervals. The origin is East Base, 1909.
Both grids are shown on the Westhaven Cove inset at 2,000 foot intervals.

CAUTION
Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:
⊙(Accurate location) o(Approximate location)

SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilot 7 for important supplemental information.

RADAR REFLECTORS
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

NOTE S
Regulations for Ocean Dumping Sites are contained in 40 CFR, Parts 220-229. Additional information concerning the regulations and requirements for use of the sites may be obtained from the Environmental Protection Agency (EPA). See U.S. Coast Pilots appendix for addresses of EPA offices. Dumping subsequent to the survey dates may have reduced the depths shown.

NOAA WEATHER RADIO BROADCASTS
The NOAA Weather Radio stations listed below provide continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Astoria, OR	KEC-91	162.40 MHz
Olympia, WA	WXM-62	162.475 MHz

NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 13th Coast Guard District in Seattle, Washington or at the Office of the District Engineer, Corps of Engineers in Seattle, Washington.
Refer to charted regulation section numbers.

COLREGS: International Regulations for Preventing Collisions at Sea, 1972.
Demarcation lines are shown thus: — — — —

CAUTION
Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

Additional information can be obtained at nauticalcharts.noaa.gov.

AUTHORITIES
Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers and U.S. Coast Guard.

SOURCE DIAGRAM
The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

NOTE X
Within the 12-nautical mile Territorial Sea, established by Presidential Proclamation, some Federal laws apply. The Three Nautical Mile Line, previously identified as the outer limit of the territorial sea, is retained as it continues to depict the jurisdictional limit of the other laws. The 9-nautical mile Natural Resource Boundary off the Gulf coast of Florida, Texas, and Puerto Rico, and the Three Nautical Mile Line elsewhere remain in most cases the inner limit of Federal fisheries jurisdiction and the outer limit of the jurisdiction of the states. The 24-nautical mile Contiguous Zone and the 200-nautical mile Exclusive Economic Zone were established by Presidential Proclamation. Unless fixed by treaty or the U.S. Supreme Court, these maritime limits are subject to modification.

CAUTION
This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)
Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

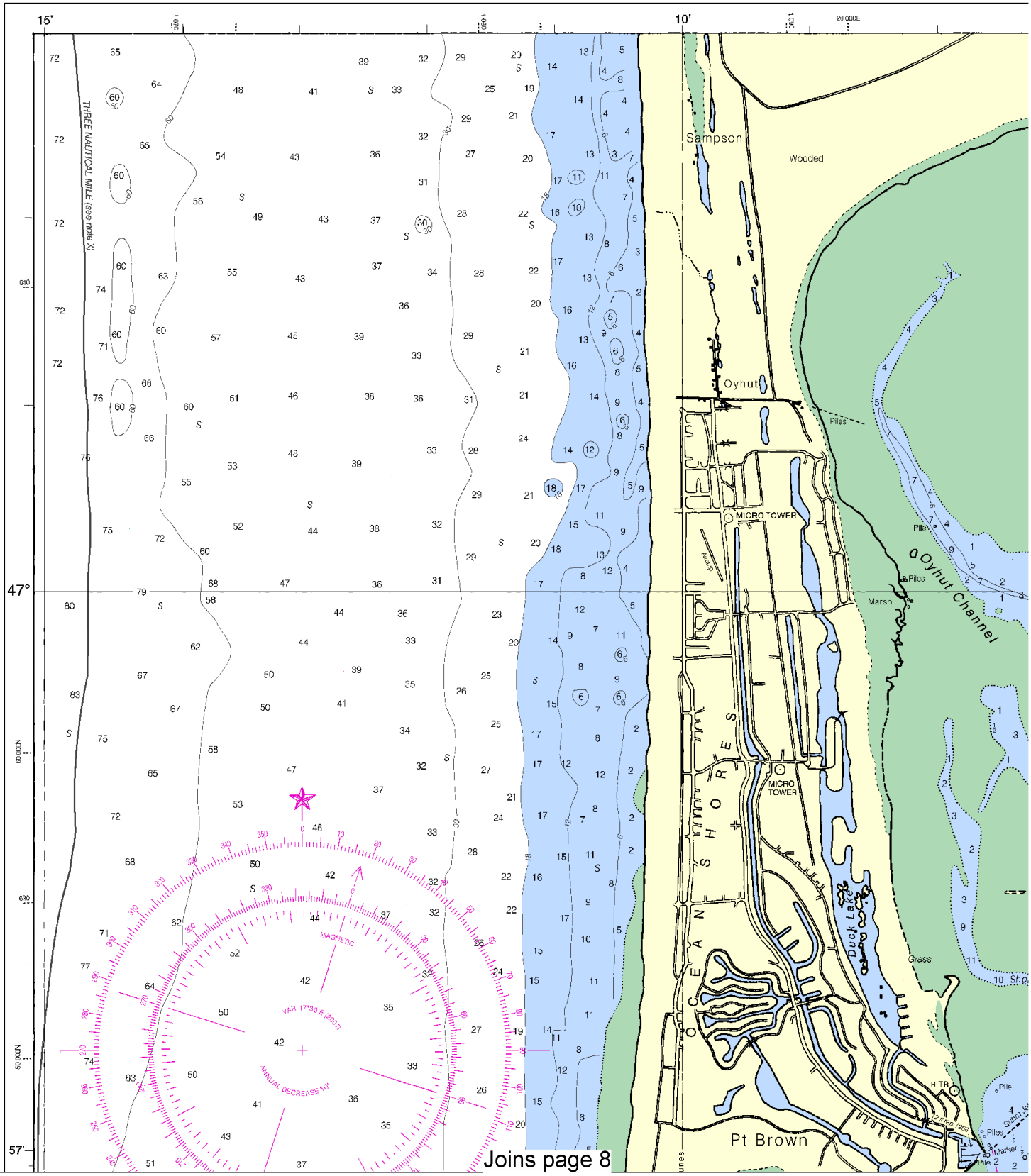
(21) Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.

TIDAL INFORMATION

PLACE		Height referred to datum of soundings (MLLW)		
NAME	(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water
		feet	feet	feet
Montesano, Chehalis River	(46°58'N/123°36'W)	8.2	7.7	0.9
Aberdeen, Grays Harbor	(46°58'N/123°51'W)	10.1	9.4	1.5

Dashes (- - -) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the Internet from http://tidesandcurrents.noaa.gov.
(Apr 2007)

SOUNDINGS IN FEET



Joins page 8

North

Printed at reduced scale. ~~SCALE 1:40,000~~

Nautical Miles 1 ½ 0 1 2 3

Yards 1000 0 1000 2000 3000 4000 5000

See Note on page 5.

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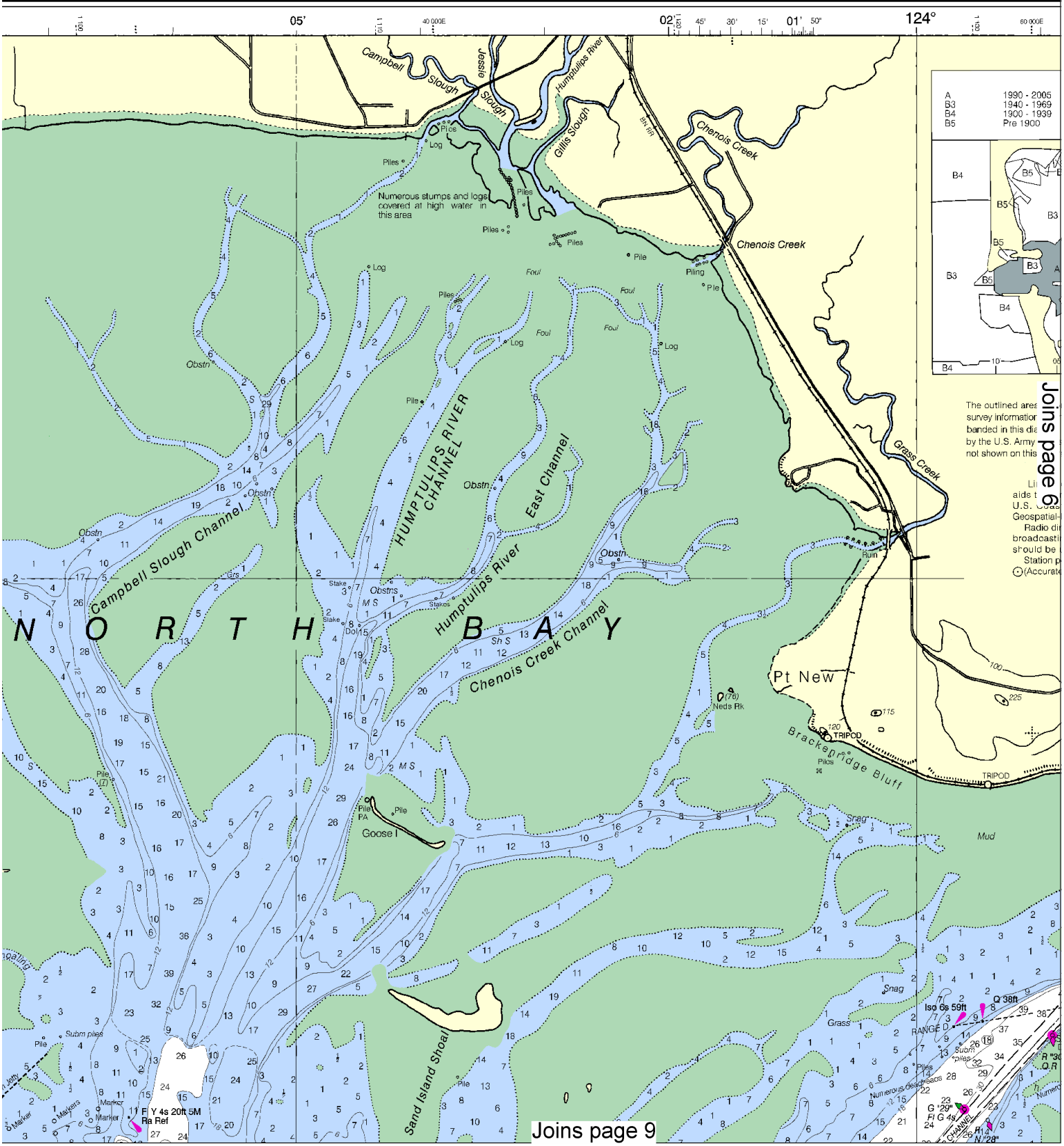
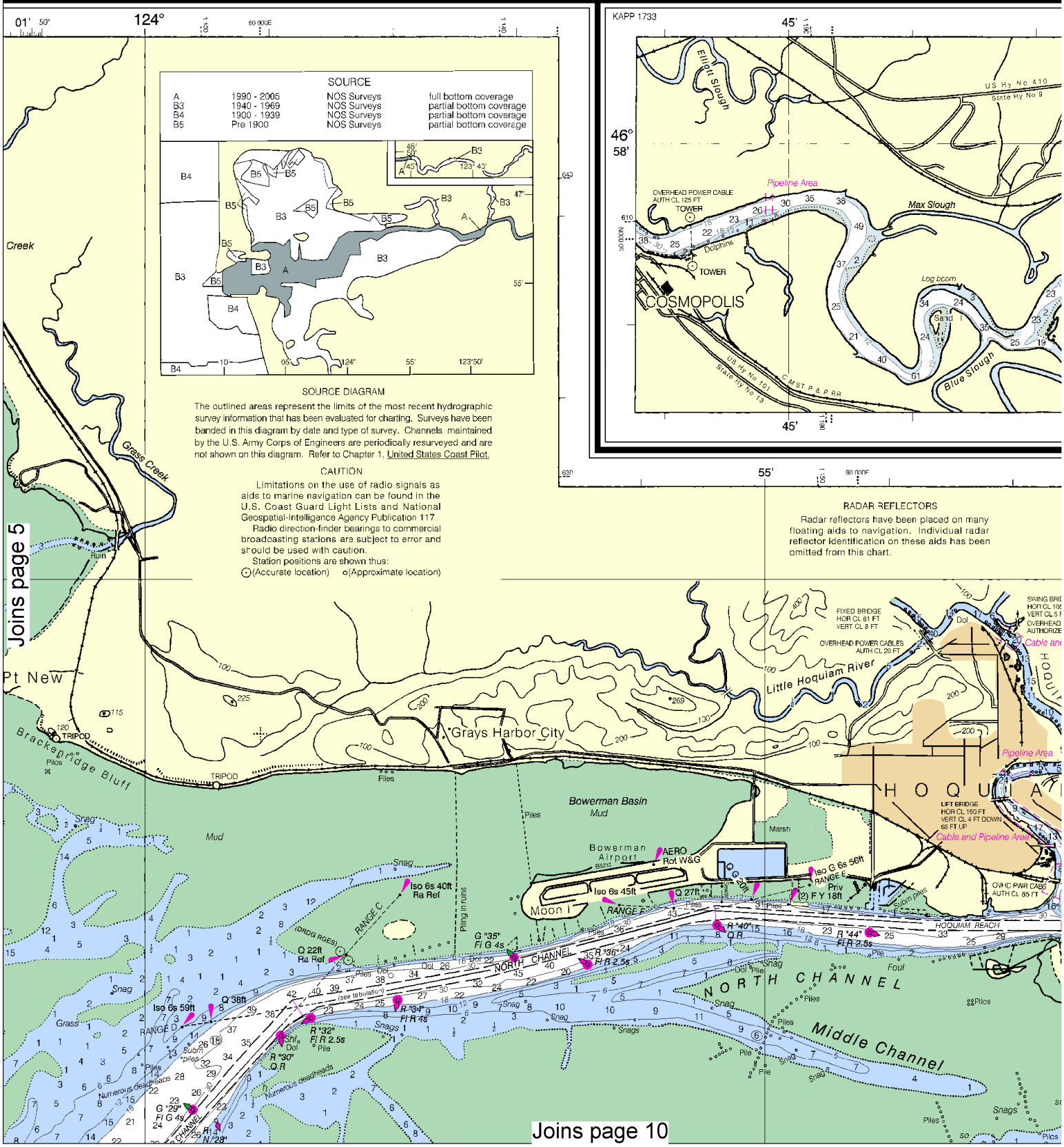
Formerly C&GS 6195, 1st Ed., June 1892 C-1942-576 KAPP 1731



This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:53333. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.

Formerly C&GS 6195, 1st Ed., June 1892 C-1942-576 KAPP 1731



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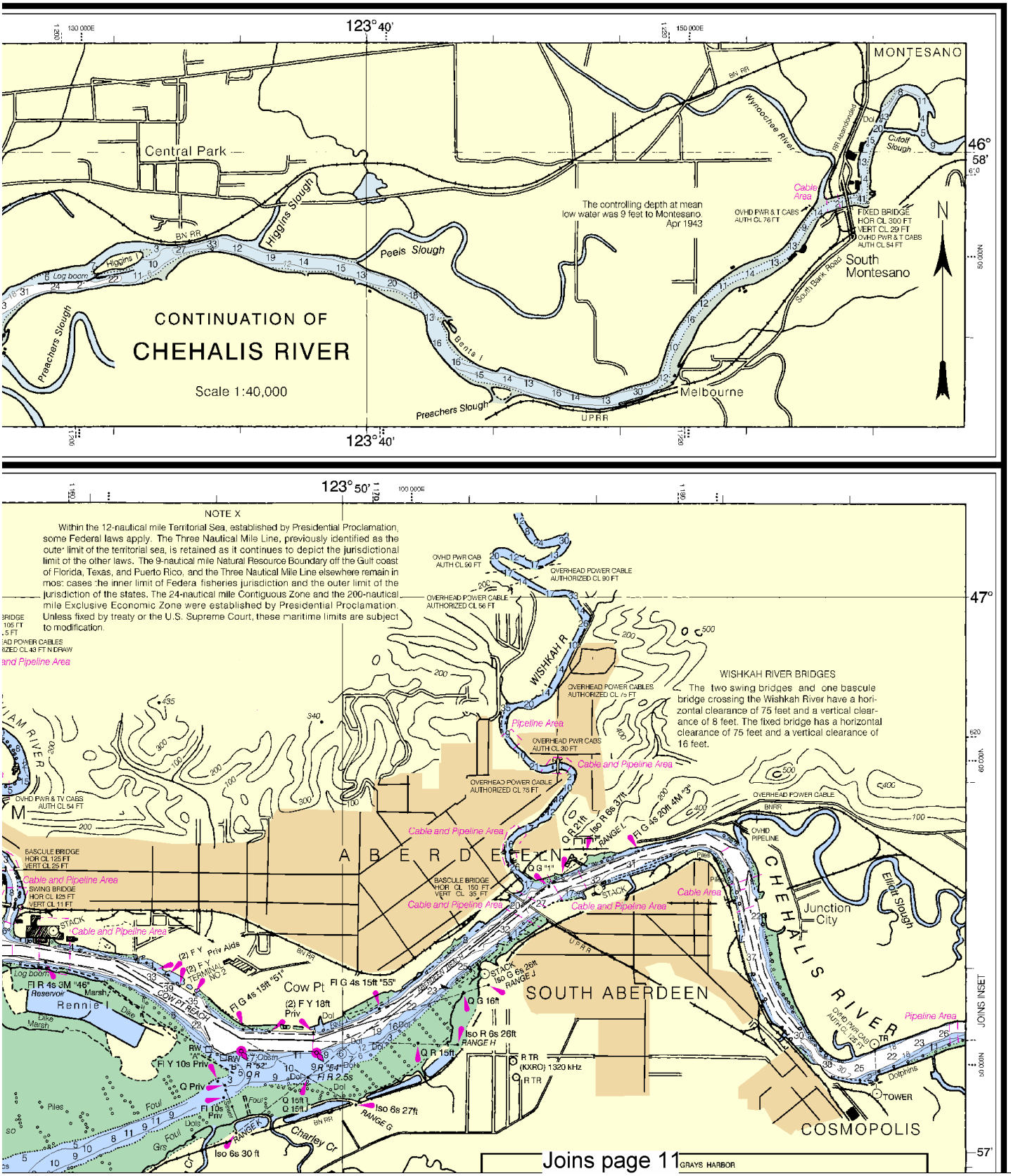
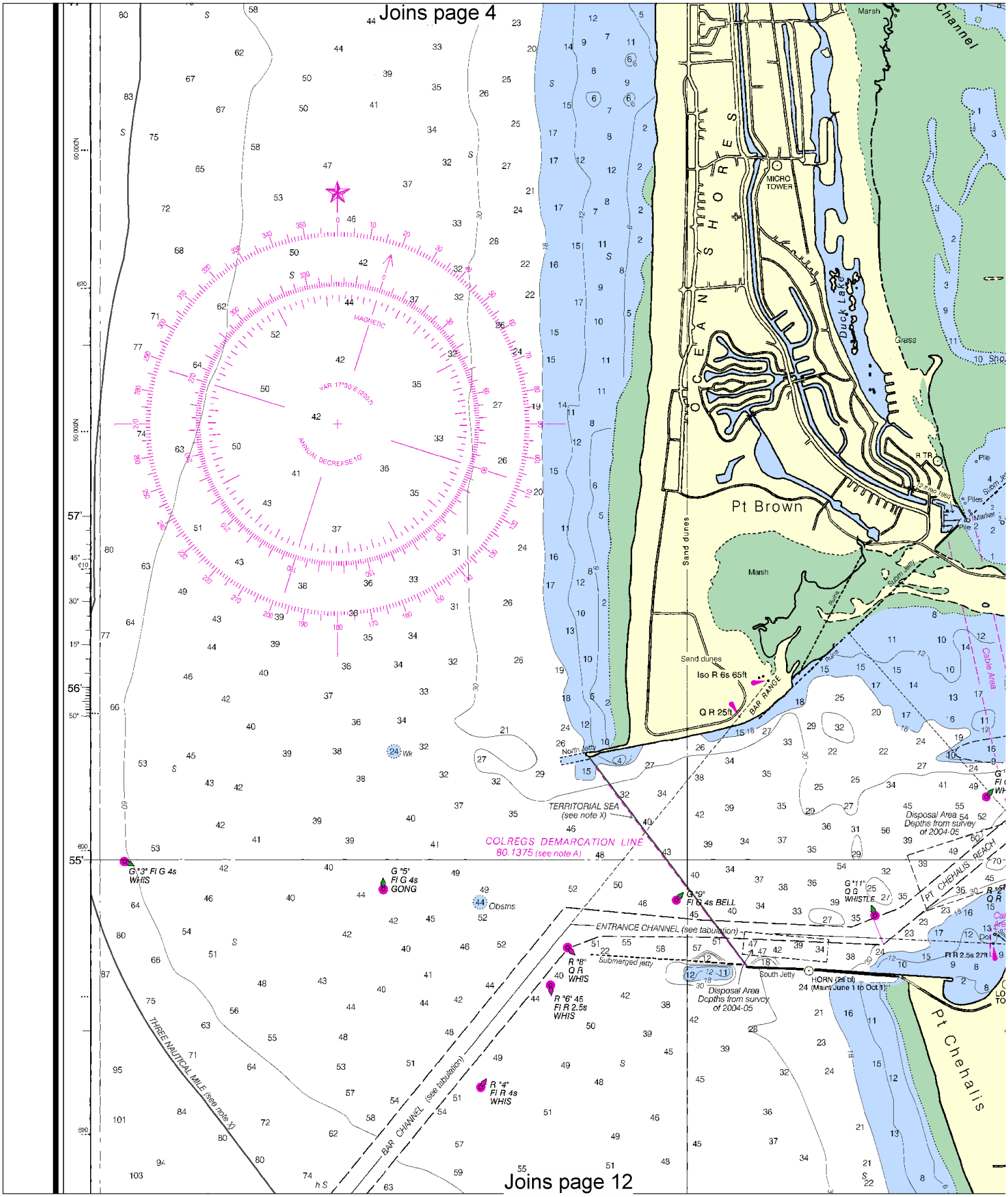
Nautical Miles: 1 ½ 0 1 2 3

Yards: 1000 0 1000 2000 3000 4000 5000



This BookletChart has been updated with: Coast Guard Local Notice To Mariners: 0710 2/16/2010,
NGA Weekly Notice to Mariners: 0910 2/27/2010,
Canadian Coast Guard Notice to Mariners: n/a .



8

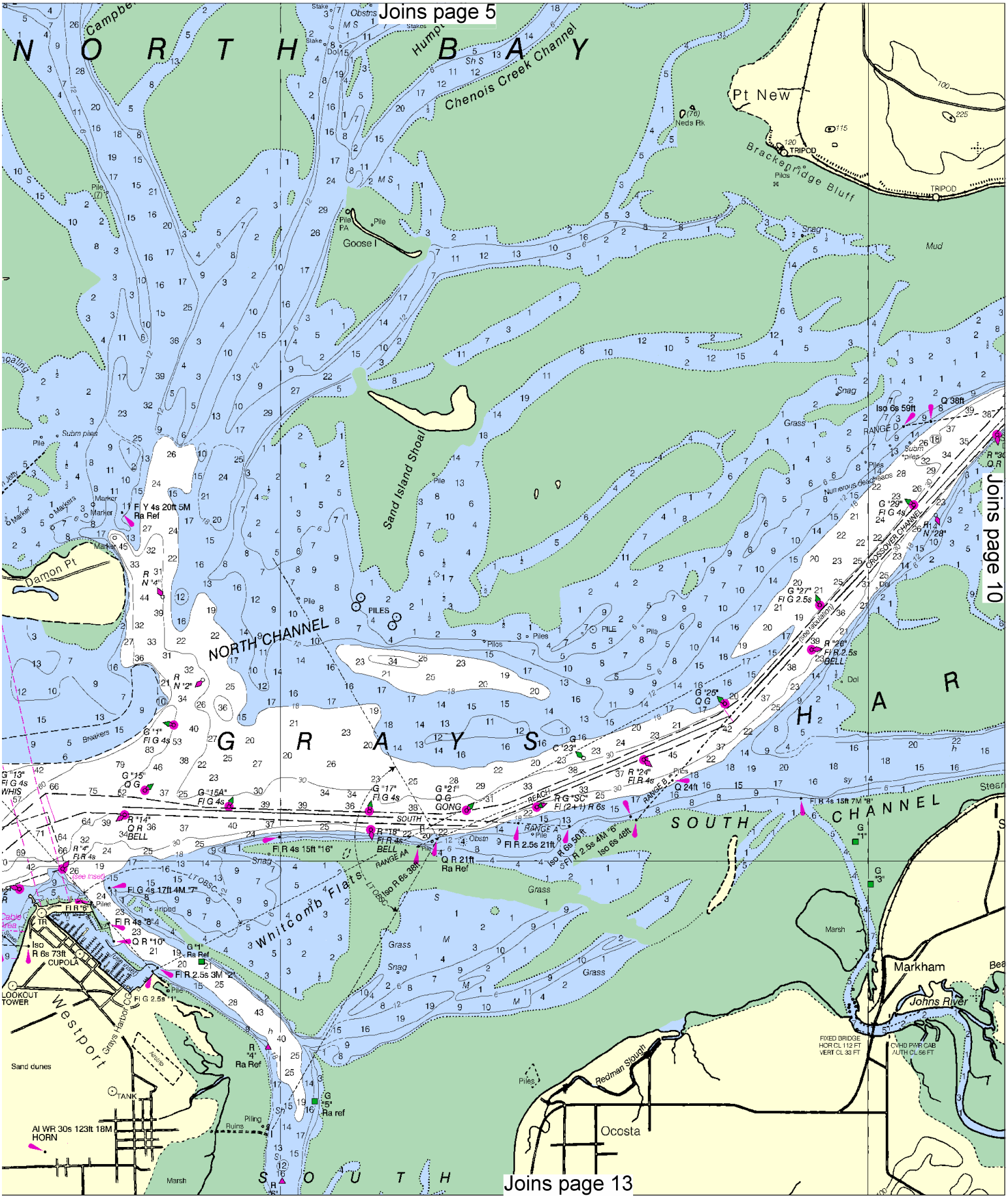
North

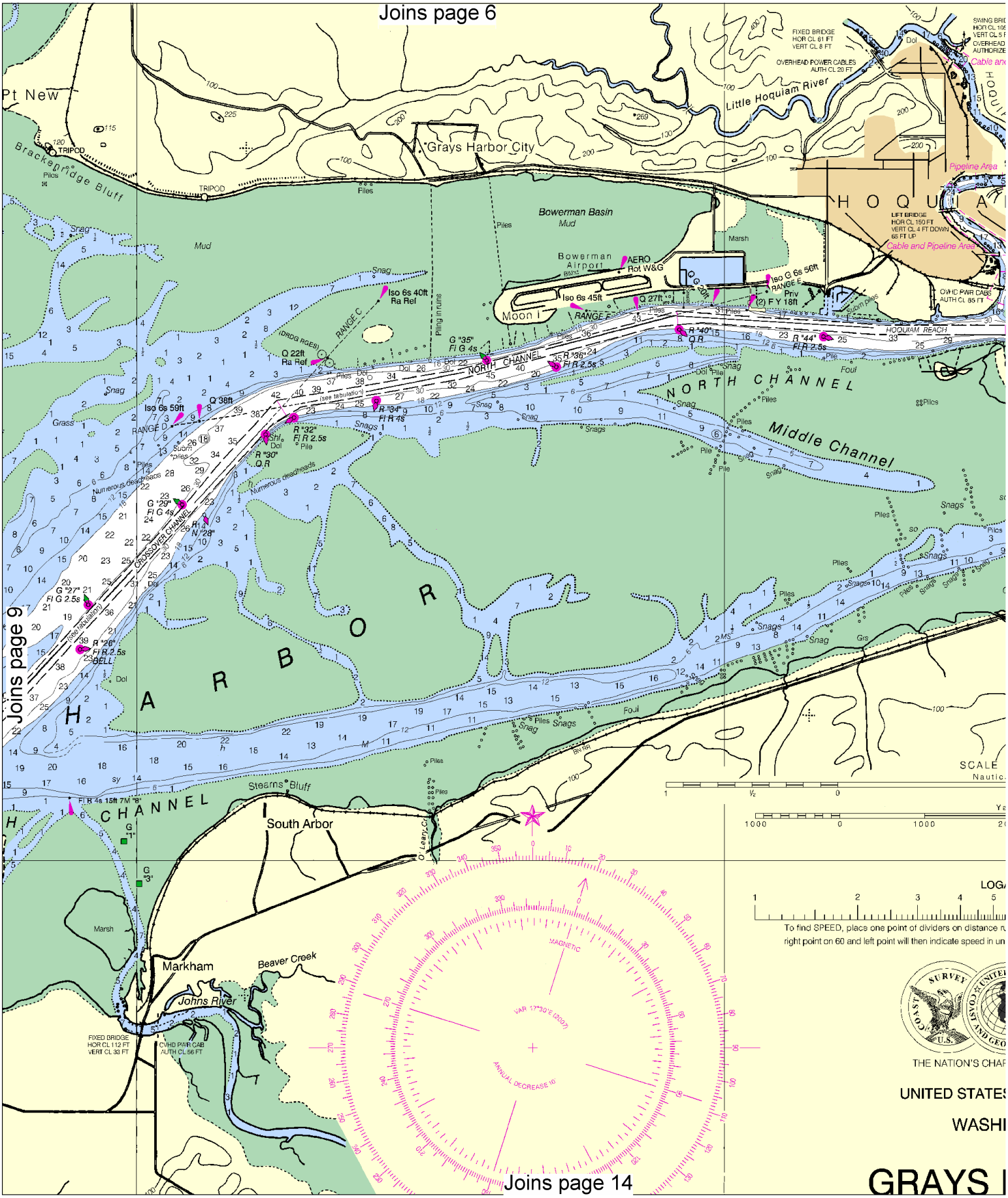
Printed at reduced scale. ~~SCALE 1:40,000~~

Nautical Miles: 1 ½ 0 1 2 3

Yards: 1000 0 1000 2000 3000 4000 5000

See Note on page 5.


Joins page 5
NORTH BAY
Chenois Creek Channel
Pt New
Neds Rk
TRIPOD
Bracken Ridge Bluff
Goose I
Mud
Sand Island Shoal
Grass
Snag
Joins page 10
NORTH CHANNEL
Damon Pt
PILES
GRAYS HARBOR
SOUTH CHANNEL
Whitcomb Flats
Westport
Gravs Harbor
LOOKOUT TOWER
CUPOLA
Sand dunes
TANK
Marsh
Markham
Johns River
Redman Slough
Ocosta
Joins page 13
SOUTH



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Nautical Miles

1 ½ 0 1 2 3

Yards

1000 0 1000 2000 3000 4000 5000

mile Exclusive Economic Zone were established by Presidential Proclamation. Unless fixed by treaty or the U.S. Supreme Court, these maritime limits are subject to modification.

Joins page 7

WISHKAH RIVER BRIDGES

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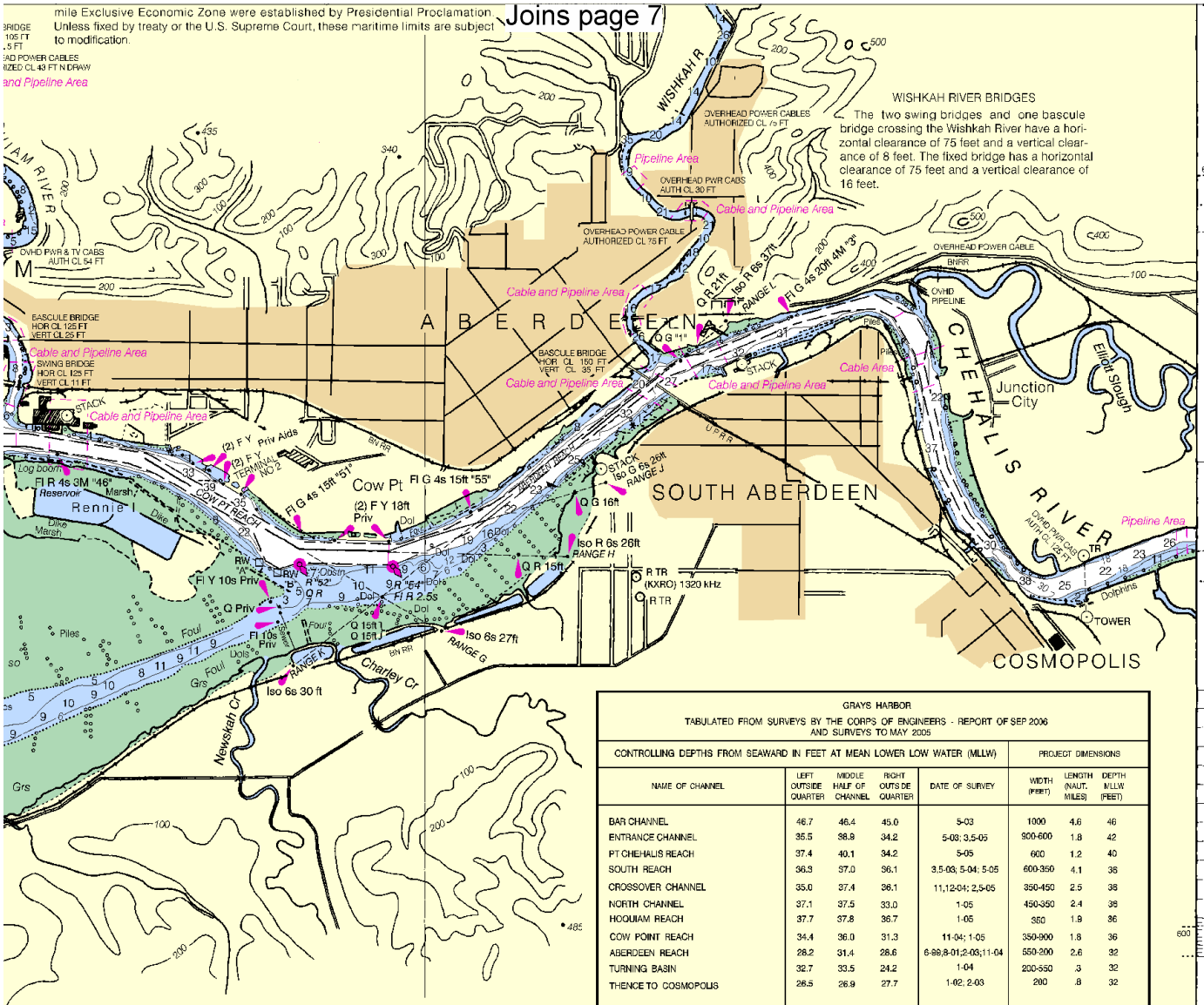


GRAYS HARBOR

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF SEP 2006 AND SURVEYS TO MAY 2005

CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)					PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH MLLW (FEET)
BAR CHANNEL	46.7	46.4	45.0	5-03	1000	4.6	46
ENTRANCE CHANNEL	35.5	38.9	34.2	5-03; 3,5-05	900-600	1.8	42
PT CHEHALIS REACH	37.4	40.1	34.2	5-05	600	1.2	40
SOUTH REACH	36.3	37.0	36.1	3,5-03; 5-04; 5-05	600-350	4.1	38
CROSSOVER CHANNEL	35.0	37.4	36.1	11,12-04; 2,5-05	350-450	2.5	38
NORTH CHANNEL	37.1	37.5	33.0	1-05	450-350	2.4	38
HOQUIAM REACH	37.7	37.8	36.7	1-05	350	1.9	36
COW POINT REACH	34.4	36.0	31.3	11-04; 1-05	350-900	1.8	36
ABERDEEN REACH	28.2	31.4	28.6	6-99,8-01;2-03;11-04	550-200	2.6	32
TURNING BASIN	32.7	33.5	24.2	1-04	200-550	.3	32
THENCE TO COSMOPOLIS	26.5	26.9	27.7	1-02; 2-03	200	.8	32

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

GARITHMIC SPEED SCALE

6 7 8 9 10 15 20 25 30 40 50 60

run (in any unit) and the other on minutes run. Without changing divider spread, place units per hour. Example: with 4.0 nautical miles run in 15 minutes, the speed is 16.0 knots.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes s considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.675"southward and 4.615" westward to agree with this chart.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

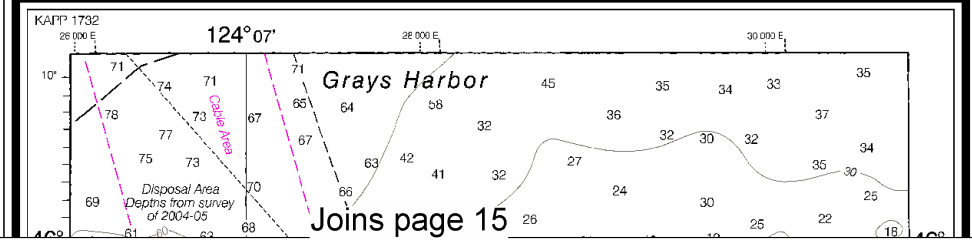
ARTMAKER SINCE 1807

ES - WEST COAST

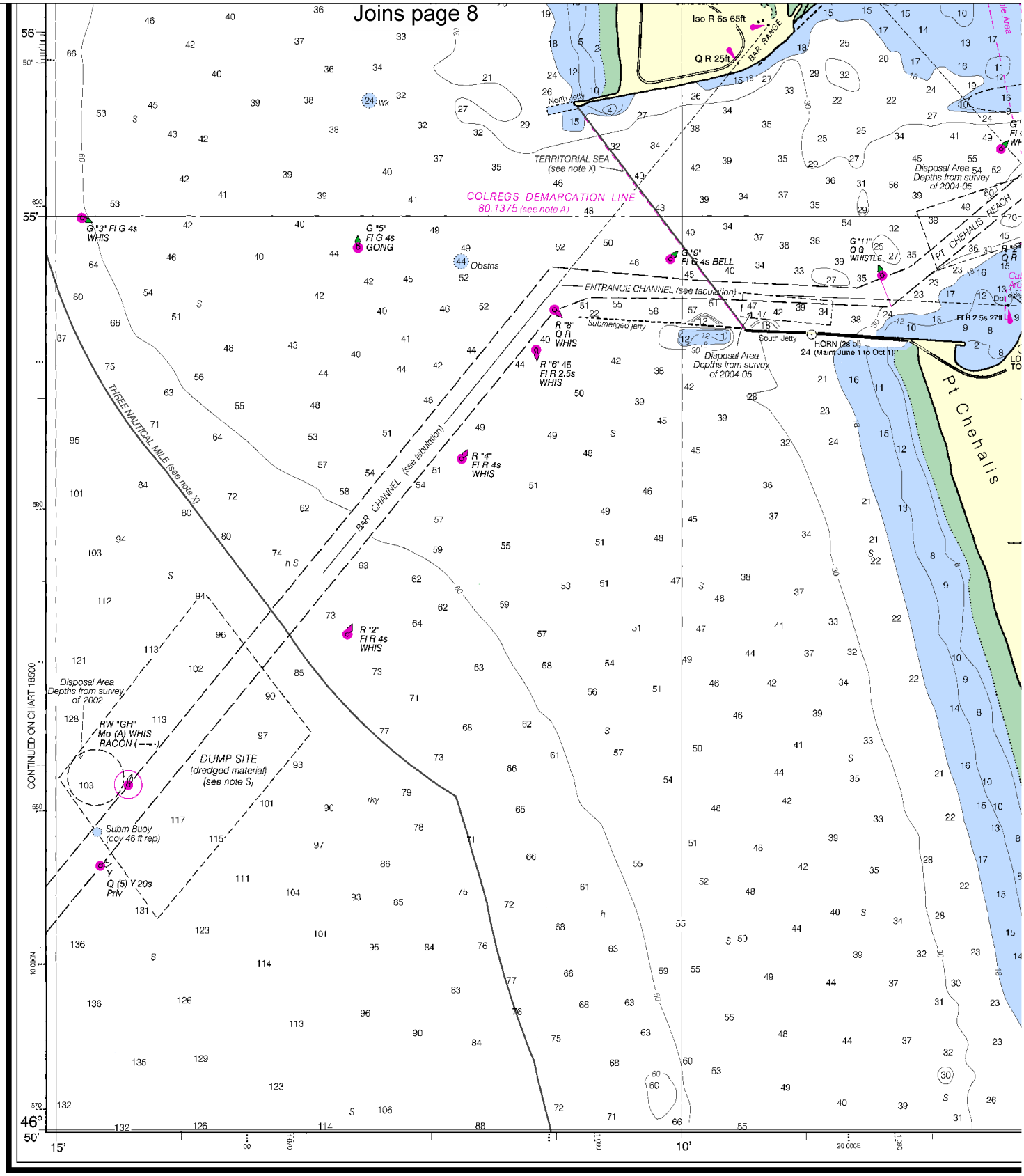
HINGTON

HARBOR

123° 50'



Joins page 15



86th Ed., May/ 07 ■ Corrected through NM Apr. 28/07
Corrected through LNM May 01/07

18502

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WARNING

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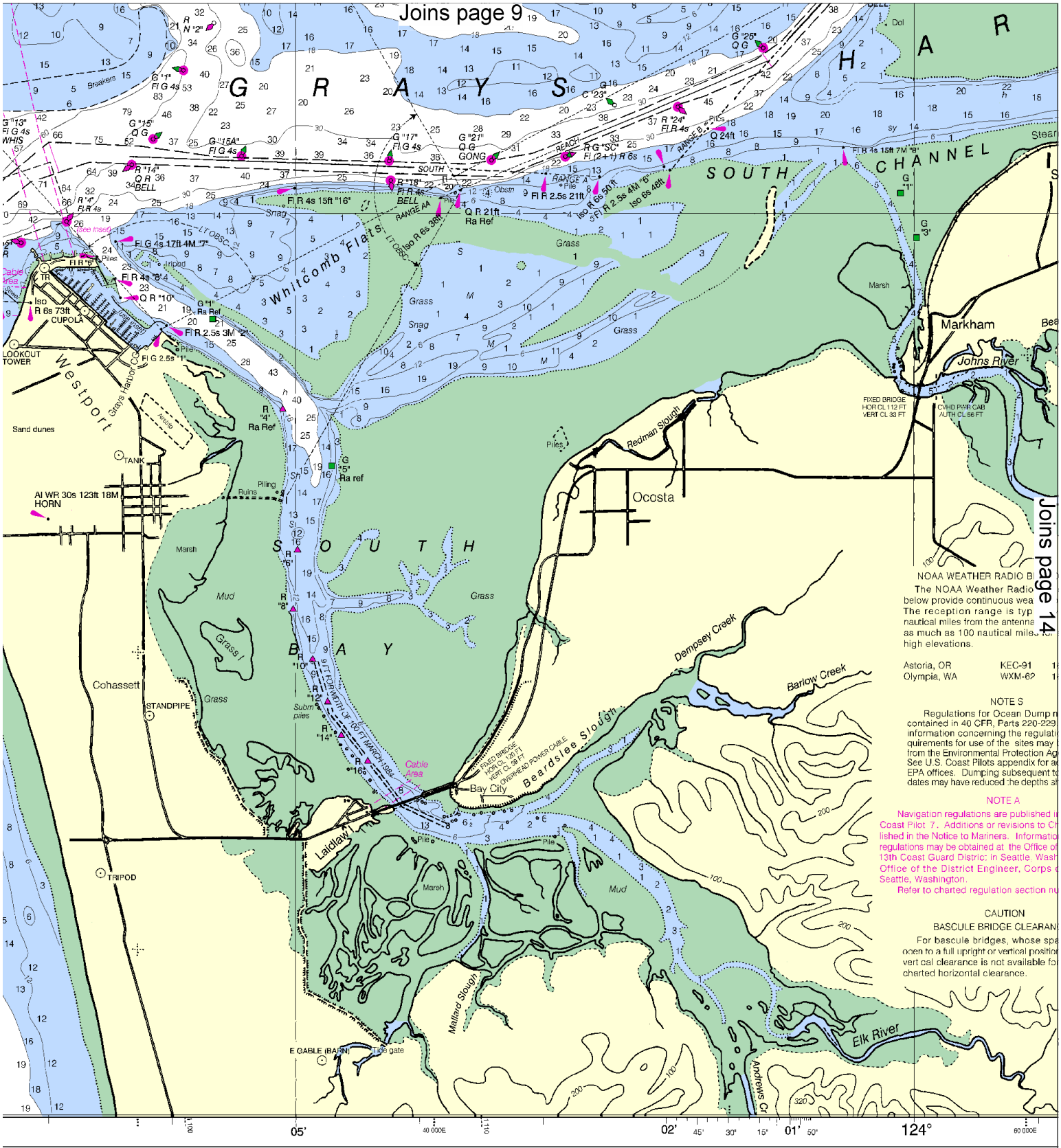
North

Printed at reduced scale. ~~SCALE 1:40,000~~ See Note on page 5.

Nautical Miles: 1 ½ 0 1 2 3

Yards: 1000 0 1000 2000 3000 4000 5000



NOAA WEATHER RADIO

The NOAA Weather Radio below provide continuous wea The reception range is typ nautical miles from the antenna as much as 100 nautical mile high elevations.

Astoria, OR	KEC-91
Olympia, WA	WXM-62

NOTE S

Regulations for Ocean Dump contained in 40 CFR, Parts 220-229 information concerning the regulati quirements for use of the sites may from the Environmental Protection Ag See U.S. Coast Pilots appendix for a EPA offices. Dumping subsequent t dates may have reduced the depths s

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Refer to charted regulation section nu

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For bascule bridges, whose spa open to a full upright or vertical positio vert cal clearance is not available fo charted horizontal clearance.

PRINT-ON-DEMAND CHARTS

NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5 8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at 1-800-584-4683, http://NauticalCharts.gov, help@NauticalCharts.gov, or OceanGrafix at 1-877-56CHART, http://OceanGrafix.com, or help@OceanGrafix.com.

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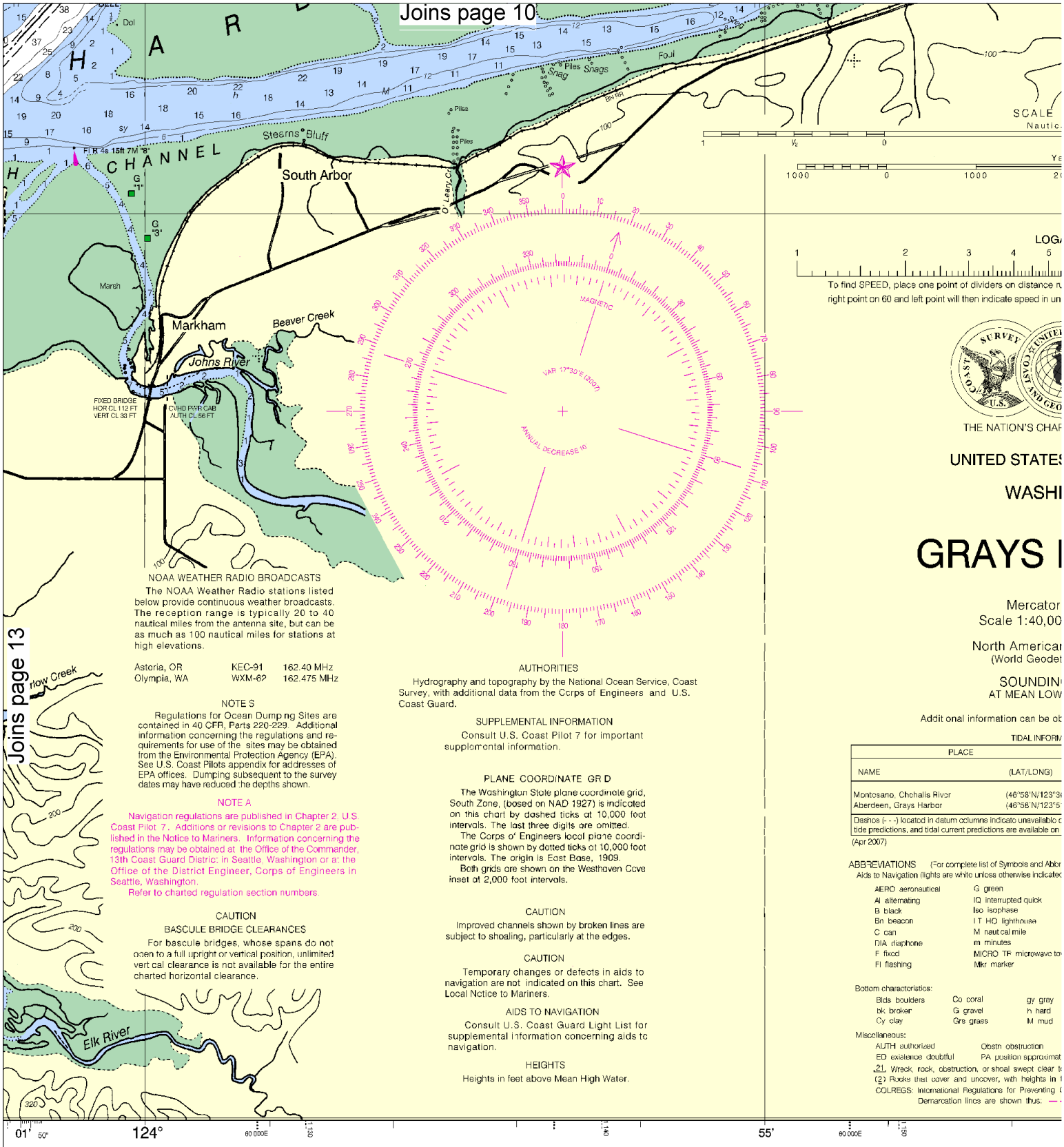
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

Joins page 10



Joins page 13

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SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 7 for important supplemental information.

PLANE COORDINATE GRID

The Washington State plane coordinate grid, South Zone, (based on NAD 1927) is indicated on this chart by dashed ticks at 10,000 foot intervals. The last three digits are omitted.

The Corps of Engineers local plane coordinate grid is shown by dotted ticks at 10,000 foot intervals. The origin is East Base, 1909.

Both grids are shown on the Westhaven Cove inset at 2,000 foot intervals.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

HEIGHTS

Heights in feet above Mean High Water.

SCALE

Nautic.

1 ½ 0

1000 0 1000

To find SPEED, place one point of dividers on distance n
right point on 60 and left point will then indicate speed in un

THE NATION'S CHAF

UNITED STATES

WASHI

GRAYS

Mercator
Scale 1:40,00

North Americar
(World Geodet

SOUNDIN
AT MEAN LOW

Addit onal information can be ob

TIDAL INFORM

PLACE NAME	(LAT/LONG)
Montesano, Chehalis River	(46°58'N/123°3
Aberdeen, Grays Harbor	(46°58'N/123°5

Dashes (- - -) located in datum columns indicate unavailable d
tide predictions, and tidal current predictions are available on

(Apr 2007)

ABBREVIATIONS (For complete list of Symbols and Abbr
Aids to Navigation (lights are white unless otherwise indicated

AERO aeronautical	G green
Al alternating	IQ interrupted quick
B black	Iso isophase
Bn beacon	LT HO lighthouse
C can	M nautical mile
DIA diaphone	m minutes
F fixed	MICRO TR microwave to
Fl flashing	Mkr marker

Bottom characteristics:

Blds boulders	Co coral	gy gray
bk broken	G gravel	h hard
Cy clay	Grs grass	M mud

Miscellaneous:

AUTH authorized	Obstn obstruction
ED existence doubtful	PA position approximat

(1) Wreck, rock, obstruction, or shoal swept clear t
(2) Rocks that cover and uncover, with heights in f
COLREGS: International Regulations for Preventing C
Demarcation lines are shown thus: —

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
AL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

SOUNDINGS IN FEET

FATHOMS	
FEET	
METERS	

North

Printed at reduced scale. ~~SCALE 1:40,000~~ Nautical Miles See Note on page 5.

1 ½ 0 1 2 3

Yards

1000 0 1000 2000 3000 4000 5000

Joins page 11

ANNEL	35.0	37.4	36.1	11,12-04; 2,5-05	350-450	2.5	38
EL	37.1	37.5	33.0	1-05	450-350	2.4	38
HOQUIAM REACH	37.7	37.8	36.7	1-05	350	1.9	36
COW POINT REACH	34.4	36.0	31.3	11-04; 1-05	350-900	1.8	36
ABERDEEN REACH	28.2	31.4	28.6	6-99,8-01;2-03;11-04	550-200	2.6	32
TURNING BASIN	32.7	33.5	24.2	1-04	200-550	.3	32
THENCE TO COSMOPOLIS	26.5	26.9	27.7	1-02; 2-03	200	.8	32

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

1:40,000
ical Miles
1 2 3
Yards
2000 3000 4000 5000

GARITHMIC SPEED SCALE
6 7 8 9 10 15 20 25 30 40 50 60
run (in any unit) and the other on minutes run. Without changing divider spread, place
units per hour. Example: with 4.0 nautical miles run in 15 minutes, the speed is 16.0 knots.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes s considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.675"southward and 4.615" westward to agree with this chart.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

ARTMAKER SINCE 1807

ES - WEST COAST

HINGTON

HARBOR

or Projection
000 at Lat 46° 56'

an Datum of 1983
letic System 1984)

NGS IN FEET
WER LOW WATER

obtained at nauticalcharts.noaa.gov.

RMATION

	Height referred to datum of soundings (MLLW)		
	Mean Higher High Water	Mean High Water	Mean Low Water
	feet	feet	foot
°36'W)	8.2	7.7	0.9
°51 W)	10.1	9.4	1.5

lo datum values for a tide station. Real-time water levels, on the Internet from http://tidesandcurrents.noaa.gov.

obreviations, see Chart No. 1.)
ated):

Mo morse code	R TR radio tower
N nun	Rot rotating
OBSC obscured	s seconds
Oc occulting	SEC sector
Or orange	St M statute miles
Q quick	VQ very quick
R red	W white
Ra Ref radar reflector	WHIS whistle
R Bn radiobeacon	Y yellow

Oys oysters	so soft
Rk rock	Sh shells
S sand	sy sticky

PD position doubtful Subm submerged
nate Rep reported
r to the depth indicated.
n feet above datum of soundings.
g Collisions at Sea, 1972

602.3 X 951.9 mm

123° 50'

KAPP 1732

124° 07'

Grays Harbor

Cable Area

Disposal Area
Depths from survey of 2004-05

Fl R 4s 15ft "6"

Fl G 4s 17ft 4M "7"

R "2" Q R

Sign

Piles

Tripod

Westhaven Cove

LOOKOUT TOWER

Fish pens

Fl R 4s 15ft 5M "8"

20 Fl G 4s 15ft 5M "11"

Q R "10"

Iso R 6s 73ft

Westport

CUPOLA

LT OBSC

Breakwater

Fl R 2.5s 15ft 3M "2"

Dols

Fl G 2.5s 16ft 4M "1"

Ramp

Grays Harbor CG

WESTHAVEN COVE

Scale 1:10,000

Yards
100 0 100 200 300 400 500

46° 55'

46° 50'

124° 07'

Grays Harbor, Wash
SOUNDINGS IN FEET - SCALE 1:40,000

18502

ED NO. 86

NSN 7642014011574 NGA REFERENCE NO. 18BHA18502

EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.
Channel 9 – Communications between boats and ship-to-coast.
Channel 13 – Navigation purposes at bridges, locks, and harbors.
Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.
Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.
Channels 68, 69, 71, 72 & 78A – Recreational boat channels.

Distress Call Procedures

1. Make sure radio is on.
2. Select Channel 16.
3. Press/Hold the transmit button.
4. Clearly say: "MAYDAY, MAYDAY, MAYDAY."
5. Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
6. Release transmit button.
7. Wait for 10 seconds – If no response Repeat MAYDAY Call.

HAVE ALL PERSONS PUT ON LIFE JACKETS !!

Mobile Phones – Call 911 for water rescue.
Coast Guard Search & Rescue – 206-220-7001
Coast Guard Astoria – 503-861-6211
Commercial Vessel Assistance – 1-800-367-8222

NOAA Weather Radio – 162.400 MHz, 162.425 MHz, 162.450 MHz, 162.475 MHz, 162.500 MHz, 162.525 MHz, 162.550 MHz.

Getting and Giving Help – Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

NOAA, The Nation's Chartmaker

NOAA CHARTING PUBLICATIONS

Official NOAA Nautical Charts – NOAA surveys and charts the national and territorial waters of the U.S, including the Great Lakes. We produce over 1,000 traditional nautical charts covering 3.4 million square nautical miles. Carriage of official NOAA charts is mandatory on the commercial ships that carry our commerce. They are used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters. NOAA charts are available from official chart agents listed at: www.NauticalCharts.NOAA.gov.

Official Print-on-Demand Nautical Charts – These full-scale NOAA charts are updated weekly by NOAA for all Notice to Mariner corrections. They have additional information added in the margin to supplement the chart. Print-on-Demand charts meet all federal chart carriage regulations for charts and updating. Produced under a public/private partnership between NOAA and OceanGrafix, LLC, suppliers of these premium charts are listed at www.OceanGrafix.com.

Official Electronic Navigational Charts (NOAA ENCs®) – ENCs are digital files of each chart's features and their attributes for use in computer-based navigation systems. ENCs comply with standards of the International Hydrographic Organization. ENCs and their updates are available for free from NOAA at www.NauticalCharts.NOAA.gov.

Official Raster Navigational Charts (NOAA RNCs™) – RNCs are geo-referenced digital pictures of NOAA's charts that are suitable for use in computer-based navigation systems. RNCs comply with standards of the International Hydrographic Organization. RNCs and their updates are available for free from NOAA at www.NauticalCharts.NOAA.gov.

Official BookletCharts™ – BookletCharts™ are reduced scale NOAA charts organized in page-sized pieces. The "Home Edition" can be downloaded from NOAA for free and printed. The Internet address is www.NauticalCharts.gov/bookletcharts.

Official PocketCharts™ – PocketCharts™ are for beginning recreational boaters to use for planning and locating, but not for real navigation. Measuring a convenient 13" by 19", they have a 1/3 scale chart on one side, and safety, boating, and educational information on the reverse. They can be purchased at retail outlets and on the Internet.

Official U.S. Coast Pilot® – The Coast Pilots are 9 text volumes containing information important to navigators such as channel descriptions, port facilities, anchorages, bridge and cable clearances, currents, prominent features, weather, dangers, and Federal Regulations. They supplement the charts and are available from NOAA chart agents or may be downloaded for free at www.NauticalCharts.NOAA.gov.

Official On-Line Chart Viewer – All NOAA nautical charts are viewable here on-line using any Internet browser. Each chart is up-to-date with the most recent Notices to Mariners. Use these on-line charts as a ready reference or planning tool. The Internet address is www.NauticalCharts.gov/viewer.

Official Nautical Chart Catalogs – Large format, regional catalogs are available for free from official chart agents. Page size, state catalogs are posted on the Internet and can be printed at home for free. Go to http://NauticalCharts.NOAA.gov/mcd/ccatalogs.htm.

Internet Sites: www.NauticalCharts.NOAA.gov, www.NOAA.gov, www.TidesandCurrents.NOAA.gov, www.NOS.NOAA.gov.